

CLIMATE AND CROP SERVICE.

By JAMES BERRY, Chief of Climate and Crop Service Division.

The following extracts relating to the general weather conditions in the several States and Territories are taken from the monthly reports of the respective sections of the Climate and Crop Service. The name of the section director is given after each summary.

Rainfall is expressed in inches.

Alabama.—The mean temperature was 71.2°, or 0.3° below normal; the highest was 97°, at Ashville on the 15th, and the lowest, 38°, at Hamilton on the 4th. The average precipitation was 2.64, or 0.32 below normal; the greatest monthly amount, 10.14, occurred at Mobile, and the least, 0.07, at Opelika.—*R. P. Chaffee.*

Arizona.—The mean temperature was 72.7°, or 1.0° above normal; the highest was 112°, at Texas Hill on the 27th and 30th, and the lowest, 25°, at Flagstaff on the 1st. The average precipitation was 0.18, or 0.15 below normal; the greatest monthly amount, 1.50, occurred at Flagstaff, while none fell at a number of stations.—*W. G. Burns.*

Arkansas.—The mean temperature was 69.3°, or 0.7° below normal; the highest was 97°, at Newport on the 15th, and the lowest, 37°, at Pocahontas on the 4th. The average precipitation was 3.69, or 0.90 below normal; the greatest monthly amount, 6.06, occurred at Marianna, and the least, 1.92, at Malvern.—*E. B. Richards.*

California.—The mean temperature was 64.0°, or nearly normal; the highest was 114°, at Volcano Springs on the 30th, and the lowest, 10°, at Bodie on the 12th. The average precipitation was 1.39, or 0.15 above normal; the greatest monthly amount, 5.06, occurred at Crescent City, while none fell at several stations.—*Alexander G. McAfee.*

Colorado.—The mean temperature was 55.4°, or 2.0° above normal; the highest was 95°, at Delta on the 27th and 28th, and the lowest, 11°, at Breckenridge on the 1st and 3d. The average precipitation was 1.31, or 0.60 below normal; the greatest monthly amount, 4.00, occurred at Box Elder, and the least, trace, at Twin Lakes.—*F. H. Brandenburg.*

Florida.—The mean temperature was 75.5°, or slightly below normal; the highest was 96°, at Carrabelle on the 17th, and the lowest, 47°, at Wausau on the 12th. The average precipitation was 3.83, or 1.13 above normal; the greatest monthly amount, 9.34, occurred at Key West, and the least, 0.55, at Stephensville.—*A. J. Mitchell.*

Georgia.—The mean temperature was 70.8°, or practically normal; the highest was 96°, at Waycross on the 25th, and the lowest, 32°, at Diamond on the 10th. The average precipitation was 2.46, or 0.82 below normal; the greatest monthly amount, 5.44, occurred at Elberton, and the least, 0.51, at Morgan.—*J. B. Marbury.*

Idaho.—The mean temperature was 55.2°, or 2.4° above normal; the highest was 100°, at Garnet on the 9th, and the lowest, 18°, at Marysville on the 29th. The average precipitation was 1.84, or nearly normal; the greatest monthly amount, 3.84, occurred at St. Maries, and the least, 0.04, at Downey.—*S. M. Blandford.*

Illinois.—The mean temperature was 64.7°, or 1.6° above normal; the highest was 93°, at New Burnside on the 15th and at Bloomington on the 27th, and the lowest, 24°, at Havana on the 4th. The average precipitation was 4.23, or nearly normal; the greatest monthly amount, 8.02, occurred at Shobonier, and the least, 1.33, at Havana.—*M. E. Blystone.*

Indiana.—The mean temperature was 64.8°, or 2.6° above normal; the highest was 96°, at Vincennes on the 17th, and the lowest, 20°, at Prairie Creek on the 10th. The average precipitation was 4.96, or 0.75 above normal; the greatest monthly amount, 7.29, occurred at Worthington, and the least, 1.74, at South Bend.—*C. F. R. Wappenhans.*

Iowa.—The mean temperature was 63.2°, or 2.5° above normal; the highest was 98°, at Toledo on the 23d, and the lowest, 22°, at Sibley on the 3d. The average precipitation was 3.31, or 0.66 below normal; the greatest monthly amount, 6.98, occurred at Maquoketa, and the least, 0.96, at Le Mars.—*J. R. Sage, Director; G. M. Chappel, Assistant.*

Kansas.—The mean temperature was 65.5°, or 1.1° above normal; the highest was 95°, at Ulysses on the 31st, and the lowest, 29°, at Achilles on the 20th. The average precipitation was 3.39, or about 0.60 below normal; the greatest monthly amount, 6.67, occurred at Sedan, and the least, 0.20, at Colby.—*T. B. Jennings.*

Kentucky.—The mean temperature was 66.3°, or 0.5° above normal; the highest was 96°, at Maysville on the 17th, and the lowest, 29°, at Jamestown on the 4th. The average precipitation was 3.49 or 0.64 below normal; the greatest monthly amount, 6.19, occurred at Earlinton, and the least, 1.13, at Marrowbone.—*H. B. Hersey.*

Louisiana.—The mean temperature was 73.9°, or about normal; the highest was 96°, at Southern University Farm on the 26th, and the lowest, 43°, at Plain Dealing on the 4th. The average precipitation was 4.52, or 1.25 above normal; the greatest monthly amount, 9.28, occurred at Shell Beach, and the least, 0.55, at Melville.—*W. T. Blythe.*

Maryland and Delaware.—The mean temperature was 63.2°, or 0.2°

above normal; the highest was 103°, at Wyoming, Del., on the 15th, and the lowest, 20°, at Deer Park, Md., on the 4th and 5th. The average precipitation was 2.46, or 1.67 below normal; the greatest monthly amount, 4.93, occurred at Millsboro, Del., and the least, 1.00, at Baltimore, Md.—*E. C. Easton.*

Michigan.—The mean temperature was 56.4°, or 2.0° above normal; the highest was 95°, at Owosso on the 15th, and the lowest, 10°, at Omer on the 4th. The average precipitation was 2.68, or 0.52 below normal; the greatest monthly amount, 9.80, occurred at Olivet, and the least, 0.17, at Northport.—*C. F. Schneider.*

Minnesota.—The mean temperature was 59.9°, or about 3.5° above normal; the highest was 98°, at Hallock on the 12th, and the lowest, 11°, at Tower on the 3d. The average precipitation was 0.90, or about 2.00 below normal; the greatest monthly amount, 3.52, occurred at Albert Lea, while none fell at Milaca.—*T. S. Outram.*

Mississippi.—The mean temperature was 72.2°, or about 3.5° below normal; the highest was 96°, at Windham on the 16th and 27th, and the lowest, 39°, at Ripley on the 10th and 11th. The average precipitation was 3.70, or 1.49 above normal; the greatest monthly amount, 6.77, occurred at Biloxi, and the least, 0.90, at Lake.—*H. E. Wilkinson.*

Missouri.—The mean temperature was 66.2°, or 1.5° above normal; the highest was 97°, at Unionville on the 27th, and the lowest, 29°, at Potosi on the 10th. The average precipitation was 3.72, or 1.85 below normal; the greatest monthly amount, 7.61, occurred at Downing, and the least, 1.01, at Warrensburg. Over many of the central and western counties the precipitation was remarkably light. At Warrensburg, where the observations cover a period of 22 years, it was the driest May on record, and at Sedalia it was the driest since 1879.—*A. E. Hackett.*

Montana.—The mean temperature was 58.1°, or 3.2° above normal; the highest was 102°, at Ridgeway on the 27th, and the lowest, 24°, at Glasgow on the 2d and Adel on the 27th. The average precipitation was 2.34, or 0.25 above normal; the greatest monthly amount, 7.54, occurred at Dupuyer, and the least, 0.05, at Dell.—*E. J. Glass.*

Nebraska.—The mean temperature was 63.8°, or 4.3° above normal; the highest was 102°, at Holdrege and Nemaha on the 30th, and the lowest, 26°, at Lynch on the 3d. The average precipitation was 2.32, or 1.24 below normal; the greatest monthly amount, 8.00, occurred at Tablerock, and the least, 0.27, at Curtis.—*G. A. Loveland.*

Nevada.—The mean temperature was 56.6°, or about 2.0° above normal; the highest was 101°, at Las Vegas on the 30th, and the lowest, 20°, at Felton on the 13th. The average precipitation was 0.77, or about 0.38 below normal; the greatest monthly amount, 2.25, occurred at Palmetto, while none fell at Las Vegas.—*J. H. Smith.*

New England.—The mean temperature was 53.1°, or 2.2° below normal; the highest was 96°, at Norwalk, Conn., on the 15th, and the lowest, 15°, at Grafton, N. H., on the 11th. The average precipitation was 4.04, or 0.24 above normal; the greatest monthly amount, 8.24, occurred at Orono, Me., and the least, 1.30, at Cornwall, Vt.—*J. W. Smith.*

New Jersey.—The mean temperature was 60.9°, or 0.3° above normal; the highest was 98°, at Boonton and Paterson on the 15th, and the lowest, 26°, at Charlotteburg on the 6th and at Roseland on the 10th. The average precipitation was 4.71, or 0.21 above normal; the greatest monthly amount, 7.33, occurred at Rocktown, and the least, 2.53, at Bridgeton.—*E. W. McGann.*

New Mexico.—The mean temperature was 62.1°, or 0.4° above normal; the highest was 98°, at Lyons' Ranch and Messilla Park on the 30th, and the lowest, 25°, at Winsors on the 3d. The average precipitation was 1.29, or 0.56 above normal; the greatest monthly amount, 5.75, occurred at Fort Union, while at Gage, Lordsburg, Rincon, and Strauss none was recorded, and only a trace at Engle, Lyons' Ranch, and Olio.—*R. M. Hardinge.*

New York.—The mean temperature was 55.8°, or 0.4° above normal; the highest was 95°, at Cedar Hill on the 14th, and at Catskill and North Germantown on the 15th, and the lowest, 17°, at Windham on the 11th. The average precipitation was 2.35, or 1.76 below normal; the greatest monthly amount, 6.51, occurred at Carmel, and the least, 0.53, at Binghamton.—*R. G. Allen.*

North Carolina.—The mean temperature was 67.0°, or normal; the highest was 98°, at Southern Pines on the 14th, and the lowest, 31°, at Linville on the 11th. The average precipitation was 2.70, or 1.48 below normal; the greatest monthly amount, 5.71, occurred at Soapstone Mount, and the least, 0.92, at Monroe.—*C. F. von Herrmann.*

North Dakota.—The mean temperature was 59.2°, or 7.9° above normal; the highest was 106°, at Dickinson on the 27th, and the lowest, 15°, at Bottineau on the 2d. The average precipitation was 0.69, or 1.73 below normal; the greatest monthly amount, 2.27, occurred at Tower, and the least, 0.05, at Woodbridge.—*B. H. Bronson.*

Ohio.—The mean temperature was 62.9°, or 1.9 above normal; the highest was 97°, at New Waterford on the 15th, and the lowest, 20°, at

Orangeville on the 10th. The average precipitation was 2.40, or 1.07 below normal; the greatest monthly amount, 6.39, occurred at Camp Dennison, and the least, 0.84, at Canal Dover.—*J. Warren Smith.*

Oklahoma and Indian Territories.—The mean temperature was 68.1°, or 1.8 below normal; the highest was 97°, at Waukomis on the 31st, and the lowest, 39°, at Osage on the 3d. The average precipitation was 4.59, or 0.55 below normal; the greatest monthly amount, 8.92, occurred at Osage, and the least, 0.80, at Beaver.—*C. M. Strong.*

Oregon.—The mean temperature was 56.5°, or 0.7° above normal; the highest was 94°, at Pendleton on the 3d, and the lowest, 21°, at Riverside on the 11th. The average precipitation was 3.02, or 0.20 above normal; the greatest monthly amount, 9.13°, occurred at Glenora, and the least, 0.03, at The Dalles.—*E. A. Beals.*

Pennsylvania.—The mean temperature was 64.0°, or 0.7° above normal; the highest was 96°, at Derry Station and Irwin on the 17th, and the lowest, 20°, at Smethport on the 4th. The average precipitation was 2.79, or 1.96 below normal; the greatest monthly amount, 7.63, occurred at Forks of Neshaminy, and the least, 0.72, at Selins Grove.—*L. M. Dey.*

South Carolina.—The mean temperature was 70.2°, or 1.5 below normal; the highest was 96°, at Liberty on the 13th and at Yorkville on the 14th, and the lowest, 38°, at Walhalla on the 10th and at Trial on the 11th. The average precipitation was 2.37, or 0.91 below normal; the greatest monthly amount, 4.99, occurred at Yorkville, and the least, 1.17, at Society Hill.—*J. W. Bauer.*

South Dakota.—The mean temperature was 62.6°, or about 6.0° above normal; the highest was 101°, at Forest City on the 11th, and the lowest, 19°, at Watertown on the 3d. The average precipitation was 1.10, or about 2.14 below normal; the greatest monthly amount, 2.90, occurred at Greenwood, and the least, 0.01, at Shilo.—*S. W. Glenn.*

Tennessee.—The mean temperature was 67.1°, or about normal; the highest was 97°, at McKenzie on the 16th, and the lowest, 29°, at Erasmus on the 4th. The average precipitation was 2.57, or 1.11 below normal; the greatest monthly amount, 7.25, occurred at Savannah, and the least, 0.75, at Union City.—*H. C. Bate.*

Texas.—The mean temperature, determined by comparison of 47 stations distributed throughout the State, was 1.2° below normal. There was a slight excess along the immediate east coast and in a few scattered localities, while there was a general deficiency elsewhere, ranging from 1.0° to 3.3° over the northwestern half of the State. The highest was 105°, at Fort Ringgold on the 19th, and the lowest, 40°, at Tyler on the 16th. The average precipitation, determined by comparison of

53 stations distributed throughout the State, was 1.70 above normal. Nearly normal conditions prevailed along the eastern and western portions of the coast and the extreme western portion of west Texas. There was a deficiency in localities over the eastern portion of north Texas; over the other portions of the State there was a general excess ranging from 1.00 to 9.80, with the greatest in the vicinity of Fort Clark. The rainfall was generally heavy over central and southwest Texas. The greatest monthly amount, 12.50, occurred at Fort Clark, and the least, 0.10, at Point Isabel.—*I. M. Cline.*

Utah.—The mean temperature was 59.4°, or 2.5° above normal; the highest was 101°, at Elgin on the 25th, and the lowest, 21°, at Tropic on the 12th. The average precipitation was 0.36, or 0.84 below normal; the greatest monthly amount, 1.52, occurred at Millville, while none fell at Kelton, Cisco, and Elgin.—*L. H. Murdoch.*

Virginia.—The mean temperature was 64.7°, or nearly normal; the highest was 100°, at Columbia on the 14th, and the lowest, 25°, at Meadowdale on the 4th and at Columbia on the 10th. The average precipitation was 2.79, or 1.20 below normal; the greatest monthly amount, 4.52, occurred at Fontella, and the least, 1.12, at Standardsville.—*E. A. Evans.*

Washington.—The mean temperature was 56.2°, or 1.2° above normal; the highest was 93°, at Pasco on the 3d, and the lowest, 25°, at Wilbur on the 21st. The average precipitation was 3.33, or 0.69 above normal; the greatest monthly amount, 13.62, occurred at Monte Cristo, and the least, 0.10, at Sprague.—*G. N. Salisbury.*

West Virginia.—The mean temperature was 62.5°, or nearly normal; the highest was 98°, at Point Pleasant on the 18th, and the lowest, 21°, at Grafton on the 10th. The average precipitation was 2.99, or 1.02 below normal; the greatest monthly amount, 6.75, occurred at Princeton, and the least, 0.35, at Martinsburg.—*E. C. Voss.*

Wisconsin.—The mean temperature was 59.0°, or 2.8° above normal; the highest was 92°, at Grantsburg on the 11th, at Eau Claire and Osceola on the 12th, and at Prairie du Chien on the 14th, and the lowest, 16°, at Butternut, Hayward, Medford, and Osceola on the 4th. The average precipitation was 1.58, or 2.16 below normal; the greatest monthly amount, 3.77, occurred at Dodgeville, and the least, 0.32, at Hayward.—*W. M. Wilson.*

Wyoming.—The mean temperature was 55.3°, or 4.2° above normal; the highest was 97°, at Lovell on the 10th, and the lowest, 16°, at Centennial on the 1st. The average precipitation was 0.59, or 1.29 below normal; the greatest monthly amount, 2.42, occurred at Fort Yellowstone, and the least, trace, at several stations.—*W. S. Palmer.*

SPECIAL CONTRIBUTIONS.

RECENT PAPERS BEARING ON METEOROLOGY.

W. F. R. PHILLIPS, in charge of Library, etc.

The subjoined list of titles has been selected from the contents of the periodicals and serials recently received in the library of the Weather Bureau. The titles selected are of papers or other communications bearing on meteorology or cognate branches of science. This is not a complete index of the meteorological contents of all the journals from which it has been compiled; it shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau:

- Symons's Monthly Meteorological Magazine.* London. Vol. 35.
 — Meteorological Extremes. III. Wind Force. P. 49 and 65.
 — Indian Famine causing Droughts and their Prevision. P. 66.
American Journal of Science. New Haven 4th series. Vol. 9.
 Barus C. On a Method of Studying the Diffusion (Transpiration) of Air through Water, and on a Method of Barometry. P. 397.
Naturwissenschaftliche Rundschau. Braunschweig. 15 Jahrg.
 Schwalbe, G., J. Elster, and H. Geitel. Ueber die Existenz electrischer Ionen in der Atmosphäre. Beiträge zur Kenntniss der Atmosphärischen Electricität. P. 252.
McClure's Magazine. New York. Vol. 15.
 Chanute, O. Experiments in Flying. P. 127.
Ciel et Terre. Bruxelles. 21me Année.
 Arctowski, H. Observations sur l'aurore australe faites pendant l'hivernage de l'Expédition Antarctique Belge. P. 127.
 Linden, E. V. Organismes et variations atmosphériques. P. 131.
 Arctowski, H. Quelques résultats des observations météorologiques faites à Punta-Arenas (Amérique du Sud) par le Rév. P. Marabini.
Scientific American. New York. Vol. 82.
 — Atmospheric Resistance to Railroad Trains. P. 354 and 356.
Das Wetter. Berlin. 17 Jahrg.
 Kassner, C. Das meteorologische Observatorium auf der Schneekoppe. P. 97.

- Philosophical Magazine.* London. Vol. 49.
 Wilson, H. B. Variation of Electric Intensity and Conductivity along the Electric Discharge in Rarefied Gases. P. 505.
Gaea. Leipzig. 36 Jahrg.
 Klein, H. J. Die neuern Forschungen über die Warmestrahlung und Temperatur der Sonne und deren Bedeutung. P. 391.
 — Das atmosphärische Gas Krypton. P. 395.
Petermann's Mittheilungen. Gotha. 46 Band.
 Hergesell, H. Die Temperatur der freien Atmosphäre. P. 97.
Journal of School Geography. Lancaster. Vol. 4.
 Herbertson, A. J. Climate of South Africa. P. 208.
Nature. London. Vol. 62.
 Willson, C. T. R. Atmospheric Electricity. P. 149.
Science. New York. N. S. Vol. 11.
 Langley, S. P. Preliminary Account of the Solar Eclipse, May 28, 1900, as observed by the Smithsonian Expedition. P. 974.
Memorias y Revista de la Sociedad Científica "Antonio Alzate." Mexico. Tomo 14.
 Leal, M. Résumés mensuels des observations faites à Léon pendant 20 années, 1878-1897. P. 264.
 Moreno, M. La variation diurne de la déclinaison magnétique à Tacubaya en relation avec la période des taches solaires. P. 191.
Meteorologische Zeitschrift. Wien. Band 17.
 Woeikof, A. Klima von Lukschun, Centralasien. P. 193.
 Woeikof, A. Der Luftdruck und die atmosphärische Circulation in Asien. P. 202.
 Woeikof, A. Wo ist der höchste Luftdruck der Erde, mit und ohne Reduktion auf das Meeresniveau? P. 207.
 Kremser, V. Beiträge zur Frage der Kälterückfälle im Mai. P. 209.
 Kassner, C. Ergebnisse von Beobachtungen über Wogenwolken. P. 216.
 Supan, —. Die erste meteorologische Jahresreihe aus dem Südpolargebiete. P. 220.
 Hann, J. Mittlere Regenmenge zu San Fernando 1851-1895. P. 223.
 Okada, T. Der tägliche Gang der Bewölkung in Tokio. P. 224.
 Kassner, C. Eine neue Schneekristallform. P. 225.